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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,810	07/22/2003	Jack Dunnous	16375US02	6636

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EXAMINER

TUROCZY, DAVID P

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 02/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)	
	10/624,810	DUNNOUS ET AL.	
	Examiner	Art Unit	
	David Turocy	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/5/2005 has been entered.

Response to Amendment

2. The declaration filed on 12/5/2005 under 37 CFR 1.131 is sufficient to overcome the US patent Publication 2003/0197310 by Bailey et al. reference.

3. The examiner notes the amendments to the claims, filed 12/5/2005. In light of the amendment to claims 15, the 35 USC 112 rejection to the claims has been withdrawn. Claims 1-25 remain pending, claim 25 withdrawn due to a restriction requirement.

Response to Arguments

4. Applicant's arguments, see remarks, filed 12/5/2005, with respect to 35 USC 112 1st paragraph rejection have been fully considered and are persuasive. The 35 USC 112 1st paragraph rejection of claims 23 and 24 has been withdrawn.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1, 2, 7, 11, 12, 14, 19, 23, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted state of the art, hereafter ASA in view of US Patent 4946505 by Jungk, hereafter Jungk.

ASA discloses it was known in the art to produce multicolored concrete by discharging wet concrete mix from a vessel and spraying a first color dispersion onto the wet concrete discharging from the vessel to form a pattern of applied color and allowing the concrete to cure (Declaration filed 12/5/2005 paragraph 12). The spray

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inherently is under pressure and has a flow pattern. ASA discloses the first color dispersion comprises a pigment dispersed in water (Declaration filed 12/5/2005 paragraph 12).

ASA fails to disclose mixing a pigment water dispersion and a polymer binding agent to form a spray color dispersion. However, Jungk, teaching of a process for coloring concrete, discloses a known dispersion for coloring concrete comprises pigments, binders, water, and additional additives (Abstract, Example 1). Jungk discloses using any binder that will not be disturbing in the concrete and additionally promotes the dispersing of the pigments in the concrete; include polymer of vinyl acetate (Column 3, lines 31-49). Jungk discloses using a slurry of 53% by weight pigment and 2 % by weight binder, which is within the range of the applicants Claims 23 and 24, with the balance water (Example 1).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify ASA to use the pigment/binder mixture as suggested by Jungk to provide a desirable coloring of concrete with a reasonable expectation of success because ASA teaches of spraying liquid pigment onto wet concrete and Bailey teaches a pigment/binder mixture easily dissolvable and dispersible in concrete.

ASA in view of Jungk fails to explicitly teach a resultant polymer structure insoluble in water that remains part of the cured concrete. However, Jungk discloses utilizing concrete blocks including the polymer binder in areas subject to weather conditions, wherein the concrete will keep its color for many years without the need for maintenance, including architectural concrete blocks and bricks as well as concrete

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blocks used in various landscaping applications, including bank stabilizers, barrier walls, and bridges (Column 1, lines 13-25). It is the examiners position that the multi-color concrete blocks as taught by ASA in view of Jungk inherently has a polymer structure insoluble in water to protect the color pattern within the concrete block from the probable weather conditions.

ASA in view of Jungk fails to explicitly teach binding the polymer binding agent with the wet concrete. However, the prior art and the present claims, reflected by claims 11, teach all the same process steps and thus the results obtained by applicants process must necessarily be the same as those obtained by the prior art. Therefore by applying a pigment/polymer binding agent dispersion to wet concrete, it must necessarily result in the polymer binding agent bonding to the wet concrete. Either 1) the applicant and the prior art have different definitions for an spraying the dispersion on the wet concrete, or 2) the applicant is using other process steps or parameters that are not shown in the claims.

8. Claims 3-6, and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over ASA in view of Jungk and further in view of US Patent 5993551 by Hahn, hereafter Hahn.

Claims 3, 4, 15, and 16: ASA in view of Jungk teaches all the limitations of these claims as discussed in the 35 USC 103(a) rejection above. However, ASA in view of Jungk fails to teach using a plurality of nozzles to providing a first and second spray dispersion, wherein the first and second dispersion are different.

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However, Hahn, teaching of a method of multi-color spraying concrete, discloses spraying concrete, on a conveyer, using a plurality of nozzle and using different colored spray dispersions to provide the appropriate color pattern (figures, Column 8, lines 11-44). While the examiner notes Hahn is spraying formed tiles, rather than the claimed wet concrete, Hahn shows a method of spraying multiple colors to form a multicolored substrate.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify ASA in view of Jungk to use the plurality of nozzles to spray multiple color dispersions as suggested by Hahn to provide a desirable multicolored concrete with a reasonable expectation of success because Hahn discloses using multiple of nozzles to apply multiple spray dispersions is known in the art to provide the desired pattern and therefore would reasonably be expected to effectively provide a pattern in the colored concrete as taught by ASA.

Claims 5, 6, 17, and 18: ASA in view of Jungk teaches all the limitations of these claims as discussed in the 35 USC 103(a) rejection above. However, ASA in view of Jungk fails to teach pulsed spraying.

However, Hahn, teaching of a method of multi-color spraying concrete, discloses forming the desired pattern on the substrate by cycling each spray nozzle on and off to determine the pattern (Column 7, lines 37-42). Hahn discloses varying the timing between the pulsing allows for a variety of patterns to be applied to the substrate (Column 7, lines 37-42). While the examiner notes Hahn is spraying formed tiles, rather

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then the claimed wet concrete, Hahn shows a method of spraying multiple colors to form a multicolored substrate.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify ASA in view of Jungk to use the pulsed spray to spray multiple color dispersions as suggested by Hahn to provide a desirable multicolored pattern with a reasonable expectation of success because Hahn discloses using pulsing spray is known in the art to provide a variety of patterns on the substrate and therefore would reasonably be expected to effectively provide a variety pattern in the colored concrete as taught by ASA.

9. Claims 8-9 and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over ASA in view of Jungk and further in view of Kirk-Othmer.

ASA in view of Jungk teaches all the limitations of these claims as discussed in the 35 USC 103(a) rejection above. However, ASA in view of Jungk fails to teach of nozzles having a desired flow pattern selected from the group consisting of a solid cone, a hollow cone, and a flat spray, or spraying in the form of a stream.

However Kirk-Othmer, teaching of conventional spray systems, discloses that the spray pattern or shape is an important factor in selecting the right nozzle for certain processes (Page 687, full paragraph 4). Kirk-Othmer discloses that in most cases it is necessary to "fine-tune" the sprays through trial and error to achieve the goals of low cost and high performance (Page 687, full paragraph 4). Kirk-Othmer discloses known

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and conventional spray patterns utilized in various spray applications include a solid cone, a hollow cone, a flat spray, and a stream (Page 688, Table 2).

Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify ASA in view of Jungk to use any of the spray patterns, including a solid cone, a hollow cone, a flat spray, and a stream, suggested by Kirk-Othmer to provide a process with high performance and low cost because ASA in view of Jungk teaches spraying a pigment dispersion to color concrete and Kirk-Othmer teaches trial and error in selecting the specific nozzle pattern for the specific process to optimize the results of process performance and quality of the end product.

10. Claims 10 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over ASA in view of Jungk and further in view of US Patent 4578290 by Komon et al., hereafter Komon.

ASA in view of Jungk teaches all the limitations of these claims as discussed in the 35 USC 103(a) rejection above. However, ASA in view of Jungk fails to teach of adjusting the vertical distance between the substrate and the nozzle.

However, Komon, teaching of a method of spraying a substrate, discloses the distance between the is a known result effective variable, wherein the distance between the substrate and the nozzle determines the coating pattern (abstract).

Therefore it would have been obvious to one skill in the art at the time of the invention was made to determine the optimal value for the distance between the substrate and nozzle used in the process of ASA in view of Jungk, including varying the

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distance, through routine experimentation, to impart the wet concrete with the desired spray pattern.

11. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over ASA in view of Jungk and further in view of US Patent 5846315 by Johansen, Jr et al ("Johansen").

ASA in view of Jungk teaches all the limitations of these claims as discussed in the 35 USC 103(a) rejections above. However, ASA in view of Jungk fails to teach of including at least one filler in the pigment/binder mixture to produce a desired effect. However, Jungk, teaching of a process for coloring concrete, discloses a known dispersion for coloring concrete comprises pigments, binders, water, and additional additives (Abstract, Example 1).

Johansen, teaching of an aqueous composition for coloring cement based compositions, discloses including suspension enhancing agents in a pigment/binder aqueous compositions (Abstract). Johansen discloses the suspension enhancing agent decrease the settling of the aqueous component and aids in the stabilization (Column 3, lines 53-64). It is the examiners position that such suspension enhancing agents inherently act as "fillers".

Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify ASA in view of Jungk to use the pigment/binder solution including a filler suggested by Johansen to provide a desirable coloring of a cement based material because ASA in view of Jungk teaches providing additional additives to an aqueous

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- pigment/binder composition when coloring concrete and Johansen teaches that adding
- a filler aids in stabilizing the aqueous pigment/binder composition when coloring a cement-based composition.


Conclusion

- Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Turocy whose telephone number is (571) 272-2940. The examiner can normally be reached on Monday-Friday 8:30-6:00, No 2nd Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

- Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.
- For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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TIMOTHY MEEKS
SUPERVISORY PATENT EXAMINER